

The Claims

1. An electronic image frame having the function of television (TV) receiving, characterized as, comprising:

an A/D conversion unit, a video decoding unit, a signal processing unit, a display unit, a TV signal tuning unit, a multimedia player processing unit, an audio processing unit, and a microprocessor; wherein

the A/D conversion unit receives analog video signal and converts it to digital signal, and sends it into the video signal decoding unit for being processed as video digital signal, which is then sent into the signal processing unit for being processed as image digital signal for display, the display unit reduces said image digital signal to image information to complete the video processing;

the TV signal tuning unit receives TV signal in radio frequencies (RF) and processes it as an analog video signal for being sent into the A/D conversion unit and an audio signal for being subsequently power amplified in the audio processing unit and then sent to the loudspeaker to complete the audio processing;

the multimedia player processing unit decodes the multimedia file on the memory card to video signal and audio signal, the video signal is sent into the A/D conversion unit for being converted to digital signal, it is sent into the video signal decoding unit for being processed as video digital signal, which is then sent into the signal processing unit for being processed as image digital signal for display, the display unit reduces said image digital signal to image information to complete the video processing; and the audio signal is sent into the audio processing unit for being power amplified and then sent to the loudspeaker to

complete the audio processing;

the microprocessor is connected to the A/D conversion unit, the video signal decoding unit, the signal processing unit, the audio processing unit, the multimedia player processing unit, the TV signal tuning unit, respectively, to control them and adjust their parameters via I²C serial bus for dual communication.

2. The electronic image frame having the function of TV receiving as in Claim 1, characterized as, wherein said multimedia player processing unit comprising: a flash storage, a buffer storage, an electrically erasable memory, a multimedia processing unit, an audio outputting unit, a video outputting unit, a control processing unit, and a memory card driving unit, wherein

the memory card driving unit detects information on the memory card and drives the card to transmit the information contained in the multimedia file thereon to the multimedia processing unit for being decoded and sent into both the video outputting unit to output video signal and the audio outputting unit to output audio signal;

the buffer storage is used for data buffering to ease the data processing of the multimedia player processing unit; the electrically erasable memory stores the various parameters for the player, and the flash storage stores system programs;

the control processing unit processes the control signals sent from the microprocessor, then transmits the corresponding control information to the multimedia processing unit for performing the various control and parameter adjustment in the multimedia player processing unit, while the parameters thereof are stored in the electrically erasable memory for later application.

3. The electronic image frame having the function of TV receiving of either Claim 1 or Claim 2, characterized as, said electronic image frame further comprising: an infrared (IR) control unit for receiving IR controlling signal and processing the IR controlling signal as digital serial signal to be sent to the microprocessor.